Request to Archive
With The National Centers for Environmental Information
For GOES Evapotranspiration (ET) and Drought Products (GET-D)
Provided by OSPO

2014-04-18

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

1. Who is the primary point of contact for this request?

Hanjun Ding
OSPO
Physical Scientist
+1 (301) 763-8142 x 124
hanjun.ding@noaa.gov

2. Name the organization or group responsible for creating the dataset.

DOC/NOAA/NESDIS/OSDPD/SSD > Satellite Services Division, Office of Satellite Data Processing and Distribution, NESDIS, NOAA, U.S. Department of Commerce

3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.

The GET-D V1 contains evapotranspiration (ET) and drought maps generated from the Atmosphere-Land Exchange Inversion model (ALEXI). The products are estimated from the land surface temperature (LST) retrievals from the GOES East and West Imagers for the CONUS and North America (NA) at a spatial resolution of 4 km (CONUS) / 12 km (NA). ALEXI ET is retrieved over clear-sky pixels daily and ALEXI drought product is generated over 1 to 6 month compositing periods each day. The ET and drought monitoring maps will be archived in the required format (NetCDF).

Mission and operation of the related instruments:
1) Brightness temperature observations at 11 micron and 3.9 micron channels of the Imager instrument onboard the GOES East and West satellites
2) MODIS Leaf Area Index (LAI) product (MOD15A2)
3) Incoming solar radiation from GSIP are used for ET product generation. Static climatological clear-sky incoming solar radiation is used for drought product generation
4) Meteorological forcing data from Global Forecast System (GFS) (2-meter T; 2-meter RH; 50-m wind speed; surface pressure; morning sounding of potential temperature/humidity/geopotential height; downwelling longwave radiation)
5) GSIP cloud mask product

Scope of DSA: The current DSA covers the full set of the ET and drought monitoring maps produced by the current GET-D system. Detailed description of the data file name and format is included. The DSA also provides a preliminary design of data quality flags, which will be finalized after further verification from STAR/OSPO.

4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)

From 2015-03-30
Ongoing as continuous updates to the data record

5. Edition or version number(s) of the dataset:
Version 1

6. Describe the level to which the data are processed. For example, are these unprocessed raw observations, derived parameters, quality controlled or inter-calibrated data, etc.?
Level 3: Derived parameters.

7. Approximate date when the dataset was or will be released to the public:
2015-03-30

8. Who are the expected users of the archived data? How will the archived data be used?
Mike Ek (NCEP-EMC)

9. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?
No

10. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?
New Products

11. List the input datasets and ancillary information used to produce the data.
GOES AREA files; MODIS Leaf Area Index files; GSIP-v3 (incoming solar radiation and cloud mask)files; Global Forecast System (GFS) files

12. List web pages and other links that provide information on the data.
The ET and drought maps for CONUS are the main parameters from the GET-D system. The parameters are at 12 km spatial resolution and daily temporal resolution in GRIB2 and NetCDF for analysis purpose and in PNG for quick monitoring purpose. Along with the ET and drought maps, quality control flags (QC) will be generated at pixel level for the outputs in GRIB2 and NetCDF formats. Latitude and longitude coordinates of the pixel centers are provided for each of the two (CONUS and North America) domains in GRIB2 and NetCDF formats. Date and time of satellite observation, and version numbers of algorithms are included in the header. All parameters are listed below,

1. Evapotranspiration
2. Evaporative Stress Index
3. Longitude
4. Latitude
5. Quality Control Flags

13. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.
1. Standard SPSRB ATBD and manuals are available upon request.

14. Indicate the data file format(s).
1. netCDF-4

15. Are the data files compressed?
gzip

16. Provide details on how the files are named and how they are organized (e.g., file_name_pattern_YYYYMM.tar in monthly aggregations).
File names are GET-D_x_zz_yyyyddd_vvv.vv.fff.gz, where

x = product names and valid values: ET or ESI
zzzz = domain name and valid values: CONUS or NA (North America)
yyyy = four digit calendar year
ddd = day of year
vvv.vv = version number
fff = output format and valid values: grb2, nc or png
The file name extension is gz indicates data compression with the gzip utility.

Example: for July 1, 2007 (day 182) the following two files will be submitted:

GET-D_ET_CONUS_2007182_001.00.nc.gz
GET-D_ET_NA_2007182_001.00.nc.gz
GET-D_ESI_CONUS_2007182_001.00.nc.gz
GET-D_ESI_NA_2007182_001.00.nc.gz

17. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?

18. What is the total data volume to be submitted?
Historic Data: all historic data or data submitted as a completed collection.

Total Data Volume:	1GB
Number of Data Files:	4

Continuous Data: data volume rate for a continuous data production.

Total Data Volume Rate:	4GB per Day
Data File Frequency:	4 per Day
Data Production Start:	2015-03-30

19. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.
No additional updates, revisions or replacement data are anticipated.

20. Describe the server that will connect to the ingest server at NCEI for submitting the data.

Physical Location:	NOAA Center for Weather and Climate Prediction, College Park,
System Name:	ESPC DDS
System Owner:	NEDIS/OSPO
Additional Information:	

21. What are the possible methods for submitting the data to NCEI? Select all that apply.

1. FTP PUSH

22. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.

1. Advanced web services (e.g., THREDDS Catalog Service)

23. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?

No known constraints apply to the data.

24. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.

This archive request will ensure the critical products (ET and ESI) to be archived.

25. Are the data archived at another facility or are there plans to do so? Please explain.

No

26. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?

No

27. Do you have a data management plan for your data?

No

28. Have funds been allocated to archive the data at NCEI?

No

29. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.

SPSRB #0905-0007, A GOES Thermal Observation Based Evapotranspiration (ET) Product by Mike Ek. NCEP/EMC needs independent ET data from satellite for validating Noah land surface model output and satellite based drought data product for monthly drought briefing

USDA FAS/NASS/ARS needs ET/drought information for world crop forecasts and US agricultural production monitoring.

30. Is there a desired deadline for NCEI to archive and provide access to the data?

Archive by: 2015-03-30

Accessible by:

31. Add any other pertinent information for this request.

None